

The Macdonald FARM Journal



DL. 22, NO. 2

FEBRUARY, 1961



JUNIOR FORESTER

THIS SIGN INDICATES
THAT THE OWNER IS:

1. PROTECTING HIS WOODLOT
FROM FIRE AND GRAZING
2. USING HIS WOODS FOR CONTINUOUS
TREE CROPS
3. PRACTISING WISE LAND USE

We Can Increase Sap Yields

The Yarns With The Permanent Waves

Good Woodlot Management

The Romantic Ottawa

Editorial

The Forgotten Woodlot

THE public press, particularly the farm press, has been full of statements, in the last few months, by the Hon. Alvin Hamilton, Minister of Agriculture. Many of them have had a ring similar to the following:

"Many thousands of farmers in our fringe areas of agriculture have a yield return per acre of less than \$10.00 per year. If these farmers could be shown that that land and properly cultivated tree farming could produce up to \$30.00 an acre then there would be an increasing desire to shift into that more remunerative form of production. In saying this, I am perfectly aware that there will be a period of adjustment during this shift in production but I think that this problem can be met." (Speech to Ottawa Valley Milk Producers' Association).

There is little doubt that our great-grandfathers, who settled this country when horses were the only means of horsepower, made some unfortunate choices in clearing land. It is now obvious that land that previously yielded a bare subsistence to the pioneer just cannot do so in this day of machines and commercial farm operations. Many families which have found themselves on such farms have been obtaining their livelihood elsewhere for some time now. Perhaps they just abandoned their farm and took their chances in town. Perhaps they still live in the house and the farm is a residential farm. Maybe they are still trying to wrest a living from a poor soil and are being slowly squeezed by a falling standard of living.

Eastern Canada has many such farm units. Quebec alone has many thousands. It is probably safe to say that if we removed the bottom 40,000 farms (income wise) from the 120,000 odd which we had in this Province at the time of the last census, there would still remain some marginal farms. Startling as this may seem, it does point up the fact that the soils of Que-

bec are not primarily suited to agriculture. Most of its soils are much better suited to tree farming . . . or mining.

The Minister's suggestion is a good one. One-third of the farm acreage in this Province is classed as wood and two-thirds of Quebec farms have woodlots, many of which are poorly managed. More emphasis is needed on the value of good forest husbandry.

Unfortunately we are still feeling the effects of a legacy of thought which assumed Canada had sufficient supplies of forests for years to come and which also assumed that no special care is necessary to make trees grow. At any rate, this conclusion seems valid if we may judge from the practices we see such as clear cutting, and pasturing of woodlots.

Obtaining maximum return from a woodlot requires certain management skills and a knowledge of forestry. In recent years considerable research has been carried out to determine the optimum management practices for woodlots. Unfortunately both the government and farmers have been slow to realize that, to obtain the maximum return from the woodlot, it should be treated with as much care as a field crop. Silviculture has been neglected, compared to agriculture. In addition it has not been considered, until recently, as a part of the farm operation. Agronomes received little or no training in silviculture, a factor which has worked against the woodlot.

We support the proposal of the Federal Minister of Agriculture in his plan to encourage tree farming. The Canadian public would be well served by a strong government program which would assure the humble and neglected woodlot of a place of prominence in the future and which would awaken farmers and non-farmers to the value of trees. Considering that one-third of the acreage of the average Quebec farm is classed as woodland, such a programme

might go to a long way to increasing farm incomes, although the statement of \$30 an acre is perhaps optimistic for the immediate future.

Tree farming will not solve the ills of all agriculture, but it will be an attack on at least one phase of the problem. To be really effective such a programme will have to allow for the government, or a combination of the municipal, provincial and federal governments, to buy up small marginal farms or woodlots and put them into public parks, of which the populated areas of this Province are short, or sell them to other farmers as larger units. However, encouragement of tree farmers would be an easy and practical step in the right direction.

by L. G. Young

ARBORETUM SAFE

THE route of the new Metropolitan Boulevard has now been decided. It will pass to the south of the Morgan Arboretum of Macdonald College and will cause little damage to the Arboretum. Research in Woodlot Management, tree growth and other phases of silviculture is being carried on at the Arboretum which has the most complete collection of native Canadian trees in Canada. The Arboretum is sponsored by McGill University, individuals and commercial interests.

ART. BENNETT

Bilingual Auctioneer

Specialty Purebred Sales

All Breeds

Tel. 100 Sawyerville, Que.



New Power Meets Farming Costs Head On!

Here are *five* new Allis-Chalmers tractors that start a whole new trend in dollar-making farming.

From the cost-squeezing 2-plow D-10 and D-12, to the dynamic new 4-row, 3-plow D-15, 4-plow D-17, and a new compact crawler, H-3 gasoline or HD-3 diesel, they make farming *power-easy* at

lower cost.

They deliver more performance from each gallon of fuel.

These models prove how much more new tractor investment can bring. Over 50 different models in the wheel tractor line.

Brand New D-15

Newest yet! The gasoline or diesel D-15 takes 4 rows — over 13 feet — at savings that can make every fourth row a bonus. **TRACTION BOOSTER** system with Power Director matches traction and power to load . . . without fuel-wasting dead weight or needless soil compaction. Up to 25 percent more work per gallon of fuel.



TRACTION BOOSTER is an Allis-Chalmers trademark.

New Compact Crawler

ALL-NEW — comes the compact H-3 gasoline (or HD-3 diesel) with the typical ruggedness of Allis-Chalmers crawler tractor design . . . plus new compactness for close quarters like orchards or vineyards . . . toughness for heaviest farm work . . . traction for soft footing.

Farmers will like its new forward-reverse shuttle clutch for shovel or blade work, and great new 3-plow lugging power.



ALLIS-CHALMERS, FARM EQUIPMENT DIVISION
CALGARY • EDMONTON • REGINA • SASKATOON
ST. HYACINTHE • TORONTO • WINNIPEG



Get the dollar-making difference with **ALLIS-CHALMERS**

INDEX

Vol. 22, No. 2

February, 1961

	Page
Editorial	2
Observations	4
We Can Increase Sap Yields	6
Good Woodlot Management	8
The Woodlot Should be Treated as Part of the Crop System	9
How Does Your Woodlot Compare With These?	10
To Talk of Many Things	11
Farmers in the News	12
The Romantic Ottawa	14
Country Lane	15
The Yarns With The Permanent Waves	16
The Better Impulse	19
The College Page	23

*The Macdonald Farm Journal is a monthly publication of
Macdonald College, McGill University.*

*All communications should be sent to Macdonald Farm Journal,
Macdonald College, Quebec.*

*Authorized as second class mail,
Post Office Department, Ottawa.*

REVISED ADVERTISING RATES FOR THE MACDONALD FARM JOURNAL

Effective May 1, 1959

Published by Macdonald College, Que.
Issued monthly, 15th. Closing date
1st. One year for \$1.00 or 3 years
for \$2.00.

General Advertising Rates: (Ag.
Comm. — 15%; c.d. 2%)

Per agate line (14 lines to the inch)
Casual 26¢
1,000 lines (per year) 25¢
3,000 lines (per year) 24¢
5,000 lines (per year) 22.5¢
per column inch \$3.64
per page \$109.20
Color (extra per page) \$35.00

Mechanical Requirements:

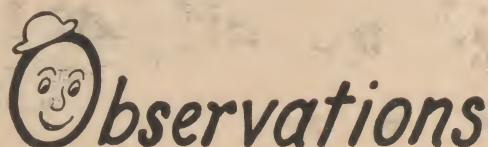
Type page: 6 $\frac{7}{8}$ ins. wide x 10 ins.
deep

Trim size: 8 $\frac{1}{4}$ ins. wide x 11 ins.
deep

Column width: 2 $\frac{1}{4}$ ins. (13 picas)
Number of columns — 3

Halftone screen: 110-120.

Editor and Advertising Manager:
L. G. Young, Macdonald College,
Que.



UNPOPULAR ADDICTION

I'M an addict—a juice addict. Or maybe I have a weak stomach. Anyhow I don't care for carbonated or soft drinks as they are called. I much prefer juices as a drink. Unfortunately, it's not always possible to get them, even in restaurants. For instance, in a Magog restaurant a short time ago I tried to get some apple juice. "Sorry," said the waitress, "we don't have any."

That started me thinking about why not. I think the answer is easy to find. Our pomologists and apple processors haven't tried to tap this drink market yet. Once in a while some ad urges you to try apple juice for breakfast, but unfortunately the American orange growers got there first. I checked the other day and found that 40¢ will buy one glass more of vitaminized apple juice than of pop. For a cool refreshing drink try chilled apple juice . . . it'll supply your vitamin C and it's cheaper . . . unless, of course, you like to burp.

WELCOME MARGARINE

I say let's welcome margarine to Quebec. Farmers have given themselves a black eye in this Province by trying to outlaw margarine. True it may have helped farm pocketbooks, but it didn't do much for public relations. The Catholic Farmers' Union is to be commended for its stand. Legislation didn't control the sale of butter substitutes anyway. If the quality of margarine can be effectively controlled, I think farmers stand to gain. If you're dead set against margarine, you might look at the handwriting on the wall. The city vote will govern this Province before long and when it does, if people wish to fry their patates frites in margarine, they will. Let's welcome margarine quietly, with as little publicity as possible.

COVER PICTURE

Willie Jones, son of Mr. and Mrs.
A. R. C. Jones, pointing out sign at gate
of Macdonald College's Arboretum.

DR. BERTRAND FOREST, APPOINTED RESEARCH ADVISER

Dr. Bertrand Forest, Agronomist and Research Officer at the Experimental Farm at Ste. Anne de la Pocatiere, has just been named research adviser to the Provincial Department of Agriculture. He will be Secretary of the Agricultural Research Council for the Province of Quebec. The announcement was made recently by the Hon. Alcide Courcy, Minister of Agriculture and Colonization.

Dr. Forest obtained his B.A. in 1939 from the College at Nicolet. He proceeded to Ste. Anne de la Pocatiere where he obtained his B.Sc. in agriculture from the University of Laval in 1943. He continued his studies and specialized in Horticulture at Macdonald College, from which he obtained his M.Sc. in 1945. He then worked for the Federal Department of Agriculture doing research in Horticulture and Apiculture at the experimental station at Ste. Anne de la Pocatiere. In 1956 he obtained his Ph.D. from Cornell University where he studied farm physiology.

The new research adviser is a

(Continued on page 11)



**PROFIT
PROVEN**

PIONEER-CAFETERIA FEEDS COVER ALL CANADA

*serving better all communities!
feeding better all livestock classes!*


Whether you're milking cows in Whitehorse, feeding hogs in Toronto, or raising chinchillas in Chicoutimi, there's a "Profit Proven" Feeding Program that's right for your purpose—and available from your nearby PIONEER-CAFETERIA dealer.

Canada's largest force of highly trained, experienced feed sales representatives fly PIONEER-CAFETERIA colours. The success of your farming operation—the solution of your feeding problem—is the objective shared by every PIONEER-CAFETERIA dealer and representative. As your farming business prospers, so too and only then, does ours.



PIONEER-CAFETERIA FEEDS LTD.

44 Eglinton Ave. West, Toronto 12
Montreal, Winnipeg, Calgary, Saint John, N.B.



We Can INCREASE SAP YIELDS

by G. A. JONES

Dept. of Bacteriology

MAPLE syrup production is an important activity on many Quebec farms during the early part of the year. In spite of the fact that nearly 90% of the market for Canadian maple syrup is available to Quebec producers, and that there is a high demand for quality maple products, the operation of many sugar bushes is not as profitable as it could be. There are various reasons for this.

Firstly, the season of sap flow is generally quite short. Although nobody knows just what it is that makes the sap run, we do know that the prevailing weather has a most important effect. Thus the heaviest flows are obtained when the temperature drops below freezing point at night, and is above freezing point and accompanied by sunshine during the day. The yield of sap obtained is therefore largely dependent upon weather conditions and nothing can be done to decrease this dependence.



Mr. G. A. Jones

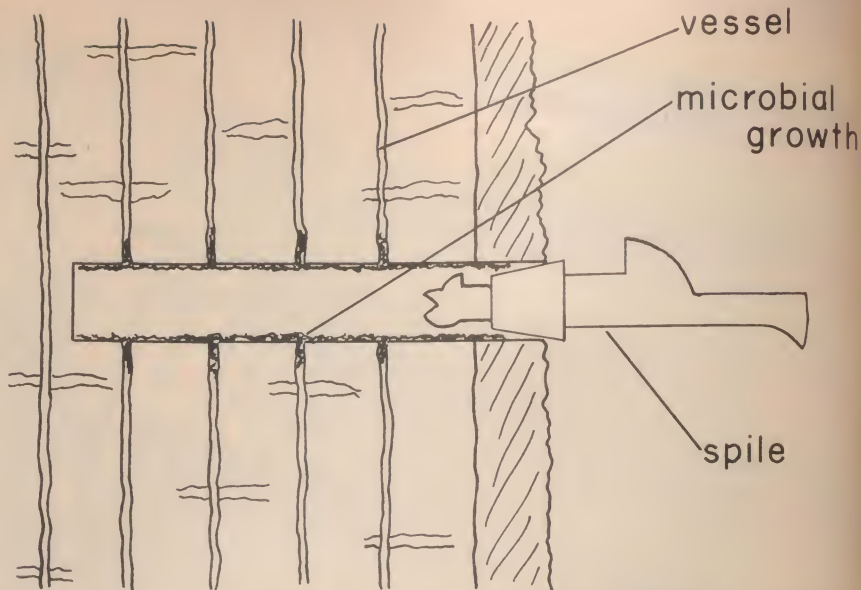


Figure 1 — Cross section of taphole showing microbial growth clogging vessels and impeding sap flow.

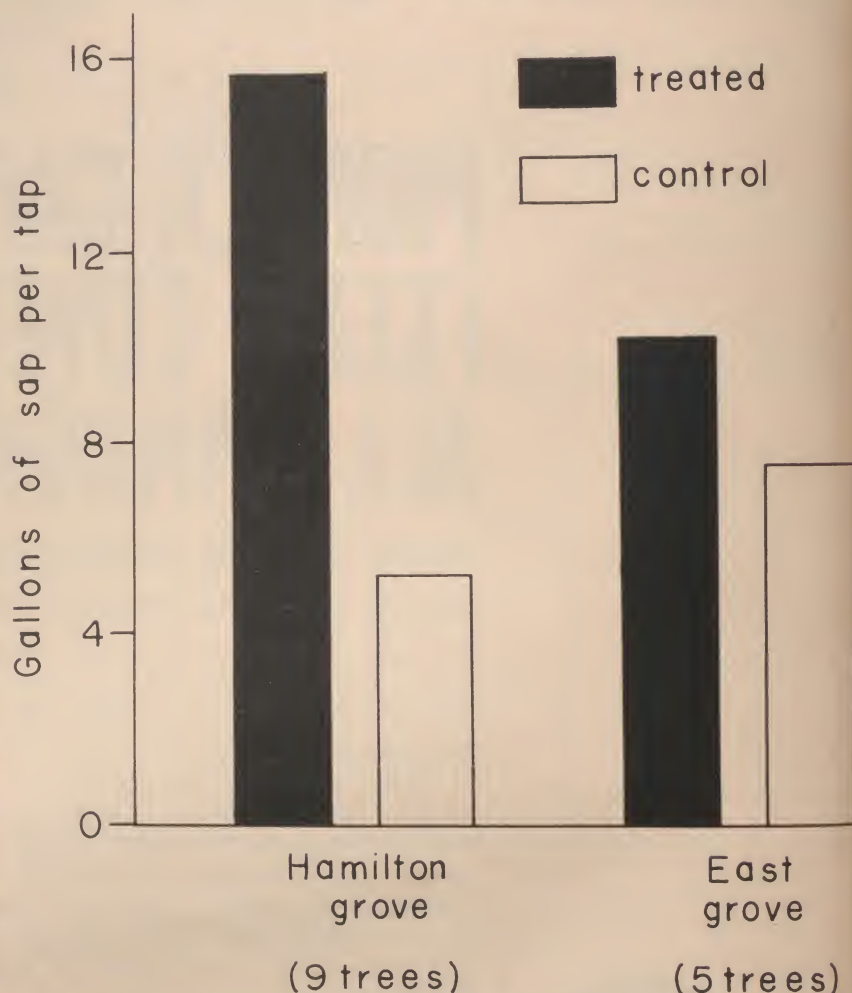


Figure 3 — Increase in sap yield from paraformaldehyde treatment.

Secondly, many Quebec farmers do not appreciate the need for proper management of their sugar bush. Just as a cow with a high potential milk yield will respond to good feeding and management, so the yield of sap from a sugar bush can be increased if the bush is given the proper care and cultiva-

tion it deserves. It is the producer's responsibility, and to his advantage, to exploit to the full this dependence of sap yield on management.

However favorable the weather during the flow and however good the management of the bush, towards the end of the season the volume of sap produced daily by

each tap falls off and eventually the tap stops flowing altogether. Until a few years ago it was thought that sap stopped flowing from the tapholes because the wind and the rising temperature combined to dry them physically, in the same way that the soil begins to dry out in the spring. We know now, however, that this is not the whole story.

Although a first glance gave us a reasonable answer to why the sap stops flowing, a second glance has given us another answer — and fortunately reveals a situation which is more easy to remedy! Research has shown us what an important effect microorganisms have on the slowing down and eventual stoppage of the sap flow.

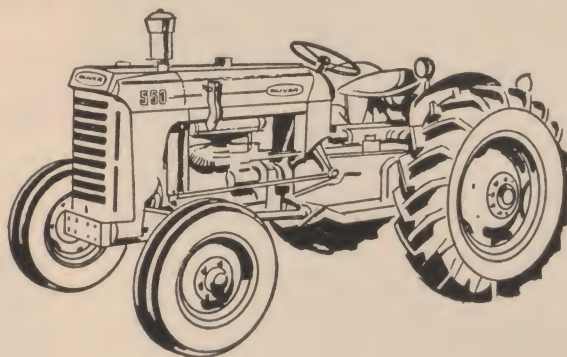
The term "microorganisms" includes bacteria, yeasts and moulds — little organisms which in general are much too small to be seen without a microscope. They may be very small in size, but they are tremendously important to us in what they do. A few types are responsible for plant and animal disease, but wine and cheese-making, silage production and the decomposition of plant and animal remains in the soil are among the many fields in which the activities of microorganisms are beneficial to us. In order that they may grow and reproduce, these microorganisms, like any other living thing, must have a source of food.

Because of its sugary nature maple sap is an excellent food material for them. They also grow much faster when the weather is warm than when it is cold. The souring of milk, due to the growth of microorganisms, which is more rapid in the summer than in the winter, is an example of this. The microorganisms present in the tapholes of the maple trees, when the weather begins to warm up as spring approaches, start to grow and reproduce quickly, using the sap as food material. Eventually so many are produced that the vessels of the tree which carry the sap to the taphole become clogged up with their bodies. The flow of sap therefore stops and the tap dries up. The diagram illustrates what happens. (Fig. 1).

The remedy for this situation is obviously to find some means of preventing the growth of microorganisms in the taphole. Several ways of doing this have been suggested. One is called "aseptic tapping", and involves drilling the tap and attaching a pipe line in

(Continued on page 13)

WITH THE NEW OLIVER 550



**22% more traction
with
9% less fuel**

In official performance contest

- 43.2% horse power, during tests**
- 5149 pounds of traction at the drawbar**
- 12.54 horse power hours at the drawbar per gallon of gasoline**

This Tractor surpasses all other gasoline tractors in its category for two reasons: it is 9% more economical than the average of its class and 22% more powerful at the drawbar. Of all agricultural tractors this has the largest selection of attachments available.

**GO BETTER
GO TO THE FRONT
With OLIVER teamed-power
equipment sold at your local
Co-operative.**



CO-OPÉRATIVE FÉDÉRÉE DE QUÉBEC

POSTAL BOX 500 — YOVILLE STATION — MONTREAL 11

Tel. DU. 9-8061



Good Woodlot Management

Made Money and Won An Award
For STAN HOLMES



Upper left: Stanley Holmes and his father, W. B. Holmes, in their woodlot.

Above: Woodlot where project was carried out, before cutting. Note crowded trees.

Left: Same area after trees had been properly thinned to encourage growth.

THE 1960 winner of the Vernon E. Johnson Woodlot Award was Stanley Holmes of Ayers' Cliff, Quebec. The Vernon E. Johnson Woodlot Award is a prize offered to the student of the Diploma Class in Agriculture at Macdonald College who most successfully completes a project on his own farm woodlot before graduation. The project is part of the student's work while at Macdonald and the purpose is to carry out timber stand improvement practices using methods taught at Macdonald.

The above pictures show the Holmes woodlot on which the project was carried out. It was a stand of mixed fir which was too crowded for maximum growth. Because the project had to be completed before graduation, a lot of one fifth

of an acre was chosen. Complete records were kept.

The first thing Stan did was to mark the trees which were to be cut. Since the woodlot was mostly spruce and fir, the spruce were favoured. Trees were cut around the young healthy spruce to permit these to stretch up into long straight sawlogs. Stan advises that it's a good idea to mark trees that are to be cut because this enabled him to work much more quickly when he was cutting.

The trees were felled so that young trees were not damaged and so as to keep the brush out of the way, thus avoiding handling of it. The larger trees were cut into sawlogs while tops and other trees were cut into pulp. If they didn't grade for pulp, they were cut into

sugar wood.

Time required to do the job was as follows:

1) laying out	3 hrs.
2) felling	40 hrs.
3) stacking	5 hrs.
4) hauling	5 hrs.
Total	58 hrs.

Allowing 75 cents per hour labour cost for the job was \$43.50. However, 833 board feet of sawlogs valued at \$42.00, 3 cords of pulp at \$54.00 and 1½ cords of sugar wood at \$9.00 were cut, leaving him a profit of \$61.50.

Stan says it is impossible at present to know how much was gained by the improvement cutting. He is sure that the young trees will grow more rapidly and they are much more likely to grow straight.

The Woodlot Should Be Treated As Part Of The Crop System Of Our Farms, says this Farmer, and he tells why

by Waymer LABEREE

Mr. Laberee operates a mixed farm at Bulwer,
Compton County, P.Q.

TRAVEL due east from the Island of Montreal in your car or by train and you will find that for nearly fifty miles you are passing through comparatively level or slightly rolling countryside. Then the landscape becomes more rugged; the fields are more irregular in shape; hills, wooded slopes and even mountains, and here and there lakes now tell you that you are in the edge of the Appalachian mountain formation.

Here, at the south-east corner of the Province of Quebec, in the County of Compton, farms are scattered rather irregularly among the wooded areas.

Originally, maples and other hardwoods had clothed the higher areas, while the lower land along the streams and rivers had a dense cover of conifers — white pine, spruces, fir, tamarack, hemlock and cedar. In this county, the original lots were laid out in two hundred acres, a third of a mile wide and nearly a mile in length. Hence due to the size and rolling nature of the land, nearly every farm had a cover of both hardwoods and conifers. The better land was cleared but on all farms there remained wooded areas which supplied the early settler with many of his needs—lumber to build his home and farm buildings, material for the farm fences, fuelwood, and many of his tools and machines were primarily of wood coming from the woodlot. Even the sugar for his food and the dyes for his clothes came from the trees that surrounded him.

As industry developed, the farm woodlot entered its second stage. The farmer found that there was now a demand for many products coming from his woodlot. This meant extra cash to augment his income from live stock and field crops. This work in his woodlot was largely carried out during the winter months with some pulpwood being cut for sale in early summer.

Now as the wooded areas of the farm were more definitely a part of the whole farm economy, and, as rapid development of new machines and methods for cutting, hauling and processing the products of the woodlot were being applied, the farm woodlot entered



Poor management. This woodlot is grazed and all young growth is killed.

the third and present stage. The woodlot has become a part of the crop system of the farm, calling for a plan of operation just as

(Continued on page 12)



9th NATIONAL SALON OF AGRICULTURE FEBRUARY 17-26, 1961 SHOW MART — MONTREAL

"The Salon of Champions" . . . hundreds of interesting features:

Agricultural contests of all kinds

Young settlers steer breeders contests

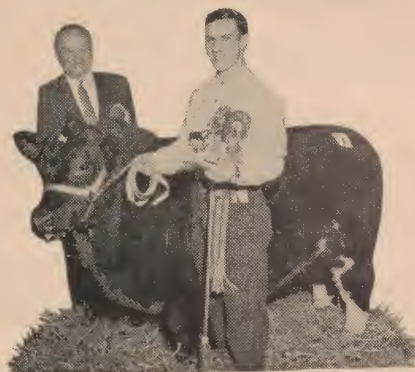
Auction sale

Crowning of Quebec's dairy Queen

Fashion show

Apple pie contest

Cooking recipes and demonstration



GRAND CHAMPION STEER SOLD IN
1960 AT \$4.20 PER POUND.

Write for information on low-price meals and lodging to:

RECEPTION SERVICE,

Salon of Agriculture,

10819 St. Denis St., Montreal.

How Does Your Woodlot Compare With These?

DO you know what the annual sales from your sugar bush are? If so you might check them against Table 1 which is the account, for a six year period, of a 22 acre sugarbush near Beauceville in the region of the Chaudière River.

The owner of the sugarbush approached the regional forester of the Quebec Department of Lands and Forests and asked his advice to improve the sugarbush. The forester found, when he cruised the bush, that it was a mixture of fir, beech and wild cherry trees with maples scattered about in small clumps. He laid out a plan of the farm in which the fields, woodlot and sugarbush were clearly defined.

Table 2 shows the yields of 11 sugar groves in different regions of Quebec. Table 3 shows yields for mixed woodlots. A comparison of average annual sales per acre indicates wide fluctuations between woodlots. Sugarbush produces much higher sales per acre than does the mixed woodlot. Data from the Quebec Department of Lands and Forests.

The owner began to clear the foreign trees out of the sugarbush. By 1947, two years later, he had progressed enough that the forester suggested he keep records on his sugar bush. By the end of 1947 the fir trees had been sufficiently cleared from the sugarbush as to lengthen the sap-flow

period of the maples since they warmed up earlier in the morning. This is clearly shown by the increase in the yield of sugar per bucket.

In the six year period the clean-up operation in the sugarbush yielded stovewood, Christmas trees, pulp and logs valued at \$3,177.40. Maple syrup and sugar was valued at \$3,192.63.

The forester estimates that it will take another 30 years to bring the sugarbush up to a reasonable standard. When these accounts were closed there still remained a large number of wild cherry and beech trees to be cleaned out of the bush.

TABLE 1
Six year account of a sugarbush

	1947	1948	1949	1950	1951	1952
1) Area in acres of sugarbush.....	24.0	24.0	24.0	22.0	22.0	22.0
2) Number of buckets.....	1,027	1,050	1,025	1,025	1,025	1,084
3) Total harvest in lbs. of sugar.....	768	1,221	1,019	1,125	945	1,294
4) Average yield of sugar per bucket.....	0.75	1.16	0.99	1.10	0.92	1.19
5) Average amount of capital invested.....	\$1,559.62	1,609.98	1,573.82	1,495.91	1,476.40	1,533.19
6) Value of sugar products sold and consumed at home.....	\$ 411.53	538.80	506.73	523.53	491.02	721.02
7) Value of wood products from sugarbush, less value of wood cut in excess of growth.....	\$ 449.75	274.00	311.00	325.06	798.84	395.25
8) Inventory at year end.....	\$1,628.60	1,591.37	1,556.17	1,485.46	1,467.35	1,599.03
9) Total 6 + 7 + 8.....	\$2,489.88	2,404.17	2,373.90	2,334.05	2,757.21	2,715.30
10) Taxes.....	\$ 15.00	15.00	13.00	13.00	13.00	13.00
11) Operating expenses.....	\$ 137.44	22.76	103.71	80.16	203.49	271.46
12) Work of horses.....	\$ 17.30	13.20	14.85	21.45	36.90	56.80
13) Family labour.....	\$ 510.50	310.50	231.50	349.00	533.50	859.00
14) Interest (line 5 at 3%).....	\$ 46.79	48.30	47.21	44.87	44.29	46.00
15) Total Expenses.....	\$ 727.03	409.76	410.27	508.48	831.18	1,246.26
16) Inventory, beginning of year.....	\$1,490.65	1,628.60	1,591.37	1,506.17	1,485.46	1,467.35
17) Total 15 + 16.....	\$2,217.68	2,038.36	2,001.64	2,014.65	2,316.64	2,713.61
18) Net Profit 9 - 17.....	\$ 272.20	365.81	372.26	318.40	440.57	1.69
19) Net profit per acre 18 ÷ 1.....	\$ 11.34	15.24	15.51	14.47	20.02	0.08
20) Return per hour of labour 13 ÷ 19 divided by hours of labour worked).....	\$ 0.766	1.09	1.30	0.956	0.913	0.50

Note — The low net revenue for 1952 resulted from : 1) Wood products cut during the year had not been sold when books were closed 2) Deep snow which arrived early held up woods operations.

TABLE 2
SUGAR BUSH
Shows yields of 11 sugar groves in different regions of Quebec.

Region	Area in Acres	Period	No. of Years	Total Sales	Average Annual Sales	Average Annual Sales per Acre.
Papineau.....	12.00	1949-58	10	\$8,269.42	\$ 826.94	\$68.91
Joliette.....	15.46	1951-58	8	8,302.64	1,037.83	67.13
Three Rivers.....	14.37	1950-57	8	3,828.55	478.57	33.30
Quebec.....	23.76	1947-58	12	13,850.21	1,154.18	48.58
Sherbrooke.....	28.85	1950-58	9	9,295.09	1,032.78	35.80
Compton.....	20.25	1953-58	6	6,578.49	1,096.41	54.14
Beauce.....	24.07	1947-58	12	7,786.12	648.84	26.96
Lotbinière.....	16.53	1948-58	11	11,945.60	1,085.96	65.69
L'Islet.....	23.30	1952-58	7	4,461.43	637.34	27.35
Temiscouata.....	34.50	1953-58	6	4,229.55	704.92	20.43
Matapédia.....	7.8	1950-58	9	3,424.85	380.54	48.79

To Talk of Many Things

Guard Against Pneumonia

LAMBING time is just around the corner. Last fall a farmer in Pontiac county told me he had quite a high death rate in his lambs shortly after lambing time. Unfortunately the killer in this case—pneumonia, could have been eliminated. Pneumonia is a bacterial infection brought on by cold, damp or draughty quarters. Any lambs infected will go off feed, and lose condition. There will be a rapid jerky breathing and the lambs may or may not cough. Quite often they die suddenly. The best cure is prevention—avoid the causes.

For a flock to be economical, a farmer must aim for a lamb crop of over 150 percent.

Frozen Grain

If you have a problem this winter with low grade, or frozen grain it is best not to use it alone. It should be mixed with better grain when fed to pigs and a good quality roughage when used with cattle. If there is any doubt about feed an excellent reference is the Quebec Feeders' Guide and Formula for meal mixtures. This booklet gives a wealth of information on feedstuffs and rations, vitamins and minerals. The guide also gives feeding standards for all classes of cattle along with thumb rules. It is a guide which is well worth while investigating and learning to use.

by John ELLIOTT,
Agricultural Fieldman

Worth Seeing

If you are a regular television viewer you have probably seen from time to time on agricultural programs, films of 5 to 10 minutes duration on subjects ranging from pastures to bees. Some of these have been made in Quebec, others throughout Canada. There are also films which are applicable to all regions. Many of these films are now available for general distribution. If you are ever planning a group discussion or farmer meeting it would be worth while looking into the variety of subjects covered. These films are obtainable from the Film Library, Macdonald College.

Avoid Odours

Another question that has been asked is whether a poultry house could be built on the second floor of a pig house. This idea is acceptable providing certain factors are taken into consideration. The major factor is one of ventilation. The pig house must be well ventilated to avoid any odours from entering the poultry house. Eggs pick up foreign odours quite quickly. It is therefore advisable to avoid direct air movements from the pig house to the poultry house. The approach to the poultry house should be arranged in such a way as to avoid this.



Better Hay

An interesting fact came out this summer from Virginia Polytechnic Institute. It is estimated that 23% of all hay grown is lost during field curing. The losses in hay are not as obvious as spilling a can of milk or the death of an animal. Losses in hay occur rather in poorer quality resulting in less feeding value. Feeding value decreases with increased maturity. It is therefore important that hay be cut at the correct maturity. The next step is reducing all weather risks. This is accomplished by reducing drying time by use of a hay crusher or crimper to get it in as soon as possible.

DR. FOREST . . .

(Continued from page 4)

member of several associations. Among others, la Corporation des Agronomes de la Province de Québec, The Agricultural Institute of Canada, and a number of Canadian and American scientific societies. Many of his papers have been published in reports from the experimental station at Ste. Anne de la Pocatière and in agricultural periodicals. *Q.D.A.*

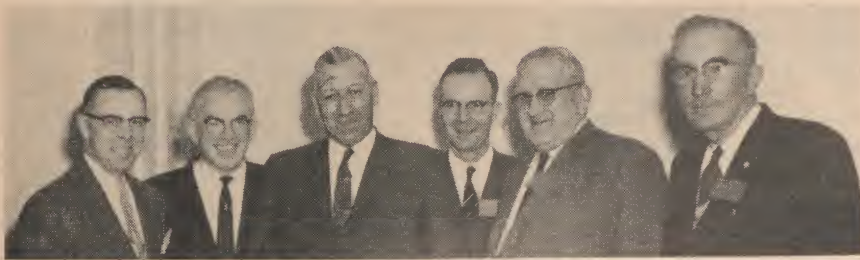
TABLE 3
MIXED WOODLOT

Shows yields for 14 mixed woodlots in different regions of Quebec

Region	Area in Acres	Period	No. of Years	Total Sales	Average Annual Sales	Average Annual Sales per Acre
Hull	85.00	1942-58	17	\$7,591.29	\$ 446.56	\$ 5.25
Quebec	39.00	1943-58	16	6,963.42	435.21	11.16
Quebec	56.50	1945-58	14	7,611.24	543.66	9.62
Beauce	56.25	1947-58	12	3,292.78	274.40	4.88
Lotbinière	419.30	1953-58	6	16,845.58	2,807.60	6.70
Kamouraska	137.00	1953-58	6	2,879.84	479.97	3.50
Rimouski	56.40	1953-58	6	552.67	92.11	1.63
Rimouski	53.30	1956-58	3	447.00	149.00	2.80
Matane	125.00	1954-58	5	591.62	118.32	.95
Matapédia	108.40	1954-58	5	1,405.25	281.05	2.59
*Lac St. Jean	18.00	1945-58	14	4,586.05	327.57	18.19
*Nicolet	18.20	1944-58	15	6,526.43	435.09	23.90
*Quebec	107.30	1945-58	14	17,643.48	1,260.25	11.74
*Temiscouata	91.00	1946-58	13	13,178.55	1,013.73	11.14

*These four woodlots were overcut; the one in the region of Nicolet was almost razed.

FARMERS IN THE NEWS...



Executive Committee of Dairy Farmers of Canada pose after that group's annual meeting in Vancouver. Left to right are Frank Lutes of Berry Mills, N.B. President, C. A. Cameron of Toronto, Executive Secretary, J. T. Monkhouse of Winnipeg, Vice-President, G. A. McLaughlin of Beaverton, Ontario, a director, F. W. Maddock of Entwistle, Alberta, a director, and W. Rettie of Fergus, Ontario, Past President. J. B. Lemoine of Montreal, 2nd Vice-President was absent when the photo was taken.

DAIRY FARMERS' OF CANADA POLICY STATEMENT

AT the recent annual meeting of the Dairy Farmers of Canada, a body representing most of Canada's dairy farmers, delegates recommended:

- 1) an effort be made to extend the June set-aside to cover a 12-month period, with a deduction of one quarter of a cent per pound per month of butterfat or equivalent, so as to substantially increase total collection. June Set-Aside funds are used to advertise dairy products.
- 2) that present offer to purchase floor price system be maintained.
- 3) that a payment be implemented to reduce the retail price of butter to the consumer by at least 10 cents per pound
- 4) that a national school milk program be developed.
- 5) that the Government buy, at the right moments, large enough amounts of skim milk powder at prices sufficient to stabilize the market.
- 6) that present policy of 25 cents per 100 pound stabilization payment to the producer be continued and that it be paid on all milk going into manufacturing channels regardless of its source.
- 7) that all skim milk powder be graded.
- 8) that the Agricultural Stabilization Board continue to support cheese at 32 cents per pound and that the price differential between Quebec and Ontario be eliminated.

DATES TO NOTE

National Salon of Agriculture—Feb. 17-26, Show Mart, Montreal.

Agricultural Institute of Canada, Montreal Branch—Feb. 20, 6.00 p.m. Queen Elizabeth Hotel, Montreal. Address by Hon. Alcide Courcy. Everybody invited.

Canadian Federation of Agriculture, 25th Anniversary Annual Meeting — Feb. 20-24, Chateau Laurier Hotel, Ottawa.

Canadian Ayshire Breeders' Association, Annual Meeting — Feb. 22, Mount Royal Hotel, Montreal.

Quebec Purebred Breeders' Association, Annual Meeting — Feb. 23, Victoria Hotel, Quebec. Mr. Hermas Lajoie will speak on "The sale of purebred animals."

Canadian Horse Breeders' Association — Feb. 21, Victoria Hotel, Quebec.

Canadian Cattle Breeders' Association — Feb. 22, Victoria Hotel, Quebec.

Swine Breeders' and Sheep Breeders' Association — Feb. 22, Victoria Hotel, Quebec.

Percheron Breeders' and Belgian Breeders' Association — Feb. 22, Victoria Hotel, Quebec.

Federation of Horse Breeders, Annual Meeting — Feb. 22, Victoria Hotel, Quebec

Macdonald College Royal, Feb. 24, Macdonald College.

Canadian Tree Farmers' Association, Annual Meeting — Feb. 27, 7.30 p.m., Knowlton High School, Knowlton, P.Q. Panel discussion: "Are There Advantages to Tree Farming?"

ANNUAL MEETING OF THE BUCKINGHAM AGRICULTURAL CO-OPERATIVE SOCIETY

The Co-operative Agricultural Society of Buckingham had a turnover of \$548,900.00, in its last fiscal year. 56% of this amount is represented by the operations of the butter factory and 44% by the sale of farm supplies. Earnings were \$5,500.00, of which the annual meeting put half in the general reserve and the other half was returned to members as patronage refunds.

The Co-operative had 171 members and last year received milk from 233 farms. Besides its butter factory and the sale of farm supplies the Co-op also consigned animals to the abattoirs of the Federation, with which it is affiliated.

THE WOODLOT . . .

(Continued from page 9)

much as any other crop that the farmer may produce.

This new tree farm development calls for various guiding principles:

A. Mapping and management for continued maximum production.

B. Protection against live stock, insects and disease, and against fire.

C. Removing diseased and defective trees and also those trees that cannot be marketed to advantage.

D. Maintaining and stimulating replacement by natural seeding and by transplanting.

E. Harvesting crops when mature and when the market demand is at the top.

On our own farm we began to apply these principles in 1950 and have gradually developed them over the ten years since until today the farm woodlot has become one of our main interests. Through this decade, the annual gross receipts have varied from \$1,156.47 as a low in 1951 to a high of \$2,568.58 in 1956, with an average yearly gross income from the woodlot of \$1,755.63. In addition, the value of fuelwood, lumber and sugar products used on the farm, or in connection with the farm, would represent an average of \$440.00 per year over the same ten year period.

Fifty-nine per cent of the re-

(Continued on page 18)

INCREASE SAP . . .

(Continued from page 7)

such a way that no microorganisms are allowed to get into the hole. This is a very tedious job, for the drill bit and the pipe line spile must be sterilized, so, although the method is used in research work where very small numbers of trees are being dealt with, it is not suitable for use in a commercial sugar bush. Another drawback is the ease with which something can go wrong during or after the drilling, when a few microorganisms may find their way into the tap and the whole operation becomes worthless.

A second and much more promising method is to make the taphole a bit deeper than usual and to put in the free space behind the spile some chemical compound which will either prevent or very much slow down the growth of microorganisms. This method was devised by workers in Michigan in 1957. During the 1960 sap flow it was tested on maple trees in the Morgan Arboretum at Macdonald College in experiments run by the Departments of Bacteriology and Woodlot Management.

Fourteen trees were used and two tapholes were drilled in each to a depth of 3 inches, one on the east side of the tree and one on the west. Into one of the holes in each tree was inserted a 2-inch long pellet, made of plaster of Paris, which had been impregnated with a compound called "paraformaldehyde". (Fig. 2, below).



Figure 2 — Tap hole with spile and formaldehyde pellet.

This compound was chosen for two main reasons; firstly, it is known to be toxic to microorganisms in very low concentration and secondly, it only dissolves very slowly, so that if it is put into the taphole before the sap flow begins, enough of the compound remains

there to be effective throughout the season — only a very little comes out in each gallon of sap. The second hole in each tree received no treatment but was used for comparison with the treated hole. In each case a metal spile was inserted and the sap collected in plastic bags.

Throughout the period of flow the amount of sap collected from both sets of holes was recorded. It was found that on the average sap flowed from the treated holes for a week longer than from the untreated one, and as a result there was an increase in total sap yield of about 50%. (Fig. 3). The effect of paraformaldehyde on sap yield thus appears very considerable. The numbers of microorganisms — bacteria, yeasts and moulds — in the sap from treated and untreated holes were determined at weekly intervals over the flow period.

The results showed that the paraformaldehyde was indeed inhibiting their growth. Very many more microorganisms were found in the sap from untreated holes than in sap from the treated ones and their numbers increased greatly towards the end of the flow. This indicates the contribution of the organisms to the drying up of the taphole. On the other hand, the numbers of microorganisms in the sap from holes containing paraformaldehyde remained very low throughout the season.

These results fulfilled our expectation that antimicrobial treatment of maple trees tapholes would enable a larger yield of sap, and therefore of maple syrup, to be obtained from the trees. There is one major snag, however. This is that small amounts of the chemical compound used appear in the collected sap and unless they are eliminated during evaporation, also in the syrup. The compound that was used, paraformaldehyde, contains a substance known as formaldehyde which is poisonous to humans in large amounts. For this reason, although formaldehyde is an excellent preservative, the Food and Drugs Act does not allow its addition to any food material whatsoever.

It therefore became important to know how much formaldehyde was present in the syrup made from sap collected from paraformaldehyde-treated tapholes. This sap was collected and evaporated separately from the remainder of the sap from the sugar bush on six occasions during the sugaring

season, and the six samples of maple syrup were then analyzed chemically to see how much formaldehyde they contained. In fact the amounts were very low, ranging from 14 parts per million at the beginning of the season when the concentration of paraformaldehyde in the tapholes was high, to 4 parts per million towards the end of the season when it was much lower. (One part per million, p.p.m., means that in a million pounds of syrup there is only one pound of formaldehyde.

As a matter of interest some samples of sugar syrups which had no formaldehyde or paraformaldehyde added to them artificially were then analyzed—natural maple syrup from various years, corn syrup, clover honey, etc. It was found that all of these products contained some formaldehyde occurring naturally, the amounts ranging from 4 to 18 parts per million. This was rather surprising but it shows that the paraformaldehyde treatment of maple tree tapholes does not lead to the presence of any more formaldehyde in the syrup that can be found in some other sugar products which have not been artificially treated. No difference could be found in the quality, with respect to colour and flavour, between treated and untreated maple syrups.

These experiments have indicated to us the potential value of antimicrobial treatment of tapholes as a means of increasing the yields of maple syrup and thus raising the profitability of the sugar bush. Before making any pellets available to maple syrup producers, however, we intend to repeat the experiments this year on a larger scale. We shall try to find some means of eliminating formaldehyde from the treated syrups altogether, or else to find a different compound which is at least equally effective in increasing the sap yield but less poisonous to consumers, and hence likely to be more readily approved by the Department of National Health and Welfare for use by individual producers.

WILFRED DELANEY DIES

MR. Wilfrid Delaney, Agronome for the County of Hull, died recently at the age of 64. He had been Agronome for the County of Hull since 1923. Well known to farmers in Hull and the surrounding region, Mr. Delaney left many friends and will be sorely missed.

The Romantic Ottawa

by Miss H. LAMBART

Mrs. E. A. WATSON

Dr. G. R. RIGBY

of the Historical Society of Argenteuil County

THE history of Canada is indissolubly linked with its great rivers and with none more so than the Ottawa, which enabled the isolated Northwest Territories to be penetrated by Champlain, who incidentally lost his astrolabe in the river in 1613. Later the same river enabled the Northwest Company traders to carry their cargoes of furs to Montreal in large freight canoes.

The Ottawa is not an easy river to navigate, particularly that section dividing Argenteuil County on the North from Ontario on the South, for between Grenville and Carillon is a 15-mile stretch of rapids known as the Long Sault that had to be navigated.

Today these rapids are being harnessed by Quebec Hydro who are building a dam across the river near Carillon to supply electricity to the Montreal area.

When completed this dam will raise the level of the river by over 60 feet near the dam and considerable areas of land on each side between Carillon and Hawkesbury will be inundated for all time and the new Lac des Ormeaux will be formed.

With the flooding of the ground the evidence of the struggle to navigate the Long Sault will be obliterated, so the Argenteuil Historical Society is anxious to compile

a record of the historical features of the shores of the Ottawa as it is today and to preserve some of its historical landmarks.

The earliest traders avoided the rapids by the simple expedient of portage. The canoe and its cargo would be carried along the north bank of the river since the south bank was precipitous and the currents dangerous.

A careful search of the ground on the north bank opposite the rapids known as the Chute à Blondeau has revealed the foundations of a number of rectangular buildings. The foundation walls are built of the rounded glacial boulders that are liberally strewn over the area, having been deposited by the ice sheets coming down from the Laurentians. The construction must have been dry walling since no trace of mortar occurs between the boulders. In places trees of considerable girth have grown inside the foundations, proof of their early date, possibly the 17th or early 18th century.

What was the object of these early buildings? An attractive theory is that they were store

houses used by the early traders to facilitate portaging.

Further along the river, west of Greeces Point, we can see the next efforts to improve navigation, a series of man-made channels formed by excavating a bed by the removal of large numbers of boulders which were stacked up to form the sides of the trenches. Where a boulder was too large to lift in one piece, it was drilled and the hole filled with blasting powder to break up.

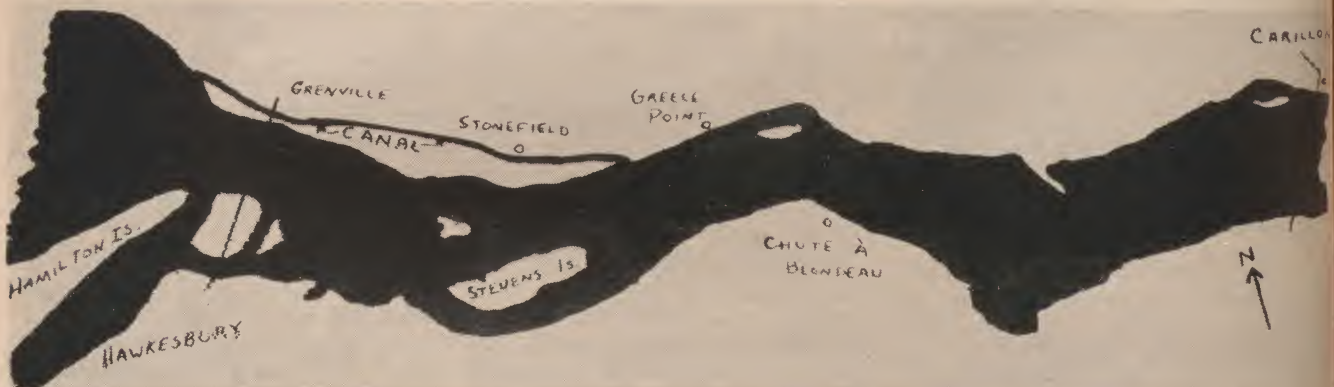
These ditches, known as Treadwell's trenches, were probably built around 1810 in an attempt to reduce portaging, or possibly they may only have been used when the river was high and the current extremely dangerous.

In 1819 a more determined attempt was made to assist navigation by building a canal system on the North bank between Carillon and Grenville. This canal system was designed and constructed by the "Royal Staffs Corps" of the British Government who collected the tolls until the project was transformed in its completed state to the Canadian Government.

(Continued on page 18)



Treadwell's Trenches, probably built around 1810. Were the first crude efforts of the voyageurs to remove some of the obstacles placed in their way by the Ottawa.



The above sketch shows the Ottawa River between Carillon and Grenville. The Canal is particularly apparent at Grenville past Stonefield almost to Greeces Point because it is inland from the River. From Greeces Point past Carillon the shipping channel is close to the north bank of the River. The new Hydro dam at Carillon is being built across the Canal.

The Country Lane

SIGNIFICANCE

*Time there was when bunting
Marked a celebration;
Now bright banners flutter
From a service station.*

*Remember, too, the day
When mail was personal:
A letter welcome, say,
From Mother, Aunt or pal.*

*How coldly different
The advertising folder
In correspondence guise
Or merely scribed: HOUSEHOLDER.*

*More generalities
May come; it is the trend;
But no push button slick
Will ere replace a friend!*

Olive Sanborn RUBENS
Montreal

ON A BUS

*The eyes melt over a hundred vacant looks
And care not who replies,
Unless a child
Who thinks you have a funny face
And says so,
And likes to sit beside the coloured lady,
Aunt Jemima,
And know everything about everything,
Until an adult hand
Curbs inhibition in its little friend.
A woman, fat and squat, vulcanized to
The thimble man who hides behind his cane,
Marred by the passing architecture
Of humanity,
Profaned by the shrewish woman
And her shrewish fat-assed ways,
Although he does not say so,
But sits gently,
His bowler fitting tight.
The dowager, the faceless queen without a kingdom,
The missing link in evolution,
Sits slumming it like a sport.
Her pancaked face belies a pancaked mind,
Chipping away,
Crumbling as the aristocracy
To liberal ideas and riding on a bus.
Still the paper comes on time,
And still the clerks wait first on her
But brush aside a tell-tale smirk.*

Blake BRODIE,
Bishop's University

New England can hire all the wise men in the world to come and teach her, and board them round the while, and not be provincial at all. That is the uncommon school we want. *Instead of noblemen, let us have noble villages of men.* If it is necessary, omit one bridge over the river, go round a little there, and throw one arch at least over the darker gulf of ignorance which surrounds us.

H. D. THOREAU



ESCAPE

*Free from the broadcast blare
Of men's high jumbled hutments!
Far from the roar of rubber
Rolling on asphalt,
Steel on resounding steel!
Here on locomotive
Wails wan warning
Of irresistible momentum,
Here is no strident sound
Of man's impetuous motion
From nowhere, to and fro,
To nowhere . . .
I lie lone, unroofed,
Enveloped in deep sky,
Touched by thin rays
From myriad far suns,
Breathing the scented breaths
Of soil-fed living things,
Feeling beneath me
The slow pulse of Earth,
Hearing about me
All small crooning sounds
Of Earth's low lullaby.
Who live their nights
Burrowed in houses
Heed not how worlds
Converse with far off worlds,
Or how Earth's merest atomies,
While stolid humans sleep,
Mark off in measured time
Their fragments of Eternity.
Lie still and pick the sounds apart.
A thousand crickets file thin saws
In thermostatic time,
Their separate slim songs
Fading to distance like the stars.
Moist in his summer stream-bed,
Some amphibian musician,
With continuous breath,
Vibrates a high-pitched reed.
The mowing locust stops
To whet his little scythe.
There is a dissonance
Of struggle in fern fronds
Cut sharply to silence
On the threshold of a cry.
Tall pines sigh siren songs
To the wandering winds,
And high desiduous trees
Nudge one another, whispering.
Earth-lulled, I sleep.*

G. P. HAWKE
Farnham, P.Q.

The Yarns With the Permanent Waves

They told me my sweater was Banlon
Or did they say Orlon or Azlon?
Was it Flufflon or Flufflene?
Dacron? Terylene?
Maybe Vinyon or Velon or Enkalon.

This kind of talk is not nonsense nor gibberish nor jabberwocky. It is a part of a new vocabulary which has grown up since 1938 when a brilliant chemist achieved what nature has been doing since nature began. He made a fibre, a very long but very, very slender thread-like strand which could be spun into yarns and woven into cloth. His new fibre must have a name so he put various letters together until he formed a pleasant word with a textile sound to it, and he christened his fibre "Nylon." Since then other brilliant men have made other new fibres and coined new names for them. Unfortunately these miracle fibres were not perfect, and still other brilliant men schemed and devised and invented ways of overcoming their faults and still other names had to be found for the processes they discovered.

It is to light a small candle of comprehension in this thundering chaos of names that this article is written. It is about Helanca and Banlon, Flufflene, Flufflon and Agilon, the elastic stretch yarns which allow a sock which looks size 8 to fit comfortably over a foot size 10—the yarns with the permanent waves.

The man-made or synthetic fibres belong to one textile family. Each is an individual and varies from the others in certain features but all bear a family resemblance. Their good qualities and their defects follow a pattern, and those frailties which the stretch processes (the permanent wave processes) discipline can be noted in one list.

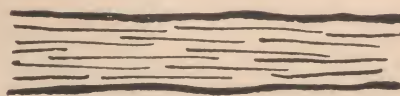
1. Synthetic-fibre fabrics are cold to the touch.
2. They lack the soft warmth of wool in winter, the cool comfort of cotton in summer.
3. Many are thin and meagre.
4. In garments such as sweaters, they pill and they lose shape.

The stretch processes are possible only because synthetic fibres are thermoplastic, and soften under heat. When the fibre is first made, its fundamental substance is disorganized.

by Prof. Marjorie M. JENKINS
School of Household Science



Its molecules, infinitesimally small, infinitely long and slender, lie helter-skelter in every direction. The fibre is coarse, dull and weak.



It is then drawn out to five times its original length. The molecules are forced to straighten and fit closely together. Cross forces like magnets hold them firmly in position. The fibre has become fine, lustrous and strong.



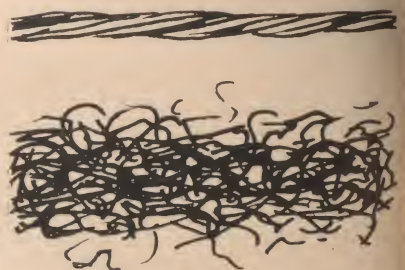
If now it is bent or twisted and heat applied, the cohesive forces lose strength and the molecules can relax into more comfortable positions to fit the new shape. When cool, the forces go into action again. The molecules cannot change position until a greater heat is applied, their position is heat-set. The permanent waves then are not truly permanent but as we do not use a high temperature on synthetics if we are wise, we may consider them so.

Helanca was the first stretch yarn. It made the stretch sock famous. Two strands of fibres are twisted together as a piece of string is twisted, heat-set, then unwound into a fluffy mass. Helanca yarns behave like coils or springs. They can be stretched to 5 times their own length again and again but they always return to the original. Unfortunately the



Miss Jenkins, measuring moisture held by test fabrics.

process is slow and expensive. It has also one amusing problem. If one yarn, twisted to the right is not balanced by another twisted to the left, a torque results, a tendency of the whole fabric to curl in the direction of the yarn coil.



Top: Ordinary nylon yarn.
Bottom: Helanca processed nylon yarn.

Flufflon is much the same as Helanca but a machine does the work continuously. There is no torque because it is done on a false-twist principle. The coil is there but it has no force to twist the fabric. Flufflon is applied to nylon, Flufflene is a similar Terylene yarn.

Banlon is usually applied to nylon although there is no reason why it cannot be applied to Orlon or Terylene or any other of the synthetics. A great strand of fibres is crammed into a stuffing-box, shoving each strand into a crimp like an accordion bellows or the marcelle wave of the 1920's. Like the marcelle the crimps are heat-set. The stretch is moderate, only 200%, but the processed yarn has the crisp bulk of a new permanent.

Stretch processes are under patent. What actually is done is a jealously guarded secret and only glimpses of the methods can be caught. All that is known of Agilon is that each fibre is drawn over a sharp, hot knife blade, like a Christmas ribbon. Each fibre spirals like an old-fashioned curl that little girls wore after their hair had been wound in papers. Little boys enjoyed taking the ends of these curls and pulling them out straight, but when the teacher reprimanded severely and the little boy let go, each curl sprang back into place. Just so Agilon yarns behave. There is no torque and none of the wild liveliness that has to be disciplined in Helanca and Flufflon.



Above is a photograph of two sweaters. The upper one was knitted of ordinary synthetic fibre. The pills, unsightly little balls of

loose fibre ends, do not show but the incongruous length of sleeve, the loose waistband and the general shapelessness do. This sweater will be discarded not because of wear but because of its unattractiveness. It never was cosy, snug and warm.

The lower is Banlon. It demonstrates the amazing new properties given to the synthetics by the stretch processes which have changed only the geometry of the yarns. The fibres no longer lie flat and close and limp. They loop and twist into a fluffy bulky mass which extends and recoils like elastic. The unsympathetic cold and almost metallic feel has changed to soft and warm; the thin poverty of the fabric to a crisp and delicate texture. The shape is defined. It will not be lost in washing. The yarns have been taught, as it were, their proper place, and they remember to return to it. It is an attractive garment, not a bread-and-butter article bought for easy care.

Pilling has been the bane of synthetic knit fabrics. The ends of all fibres will break off as lint and the lint will catch in the rough surface of the cloth. Usually it is brushed or washed or dry-cleaned away. The synthetics being extremely strong, hold it entangled. More lint and often soil accumulates until the fabric is covered with ugly grimy balls. Because the new yarns have most fibre ends tucked in, because they stretch rather than break, and because the rubbing wear on each fibre is reduced, there is less chance for pill-

ing to occur. The fabrics are not pill-proof, but they are pill-resistant.

Synthetic fibres can absorb very little moisture. It is for this reason that they are uncomfortably clammy in hot weather. A cotton shirt, for instance, will absorb the moisture from the body leaving it dry. Just as hot dry weather is less trying than hot humid weather, the cotton shirt gives the comfort of a sense of coolness. The stretch fibres have no added power in themselves to absorb but they provide thousands of locations for droplets of moisture in their tangles and curves and bends. Like the cotton they give the feeling of dryness and coolness.

They also trap air, and there is no better insulation than still air. Again, the fibres in themselves have little power to hold heat but in their new form they act like the rock-wool insulation in a wall for winter warmth.

Stretch yarns are knit into sweaters where their elasticity, bulk, warmth and freedom from pilling are advantages. They give contour-fit to socks and gloves and underwear. In carpets they combine the strength of the synthetic fibres with the resilience of wool. In dress fabrics they drape into lovely plastic folds. They prevent runs in stockings. They have been found invaluable for many small items as surgical bandages. Watch for further news of the stretch processes, the stretch yarns, and the fabrics that are made from them.

The Family of Stretch Yarns

The Yarn

Flufflon)
Flufflene)

Helanca

Banlon

Agilon

The Method

Twisted, heat
set, untwisted
(False twist)

Twisted, set,
then untwisted

The stuffer
box treatment

Crimped by a
hot knife
edge

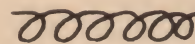
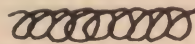
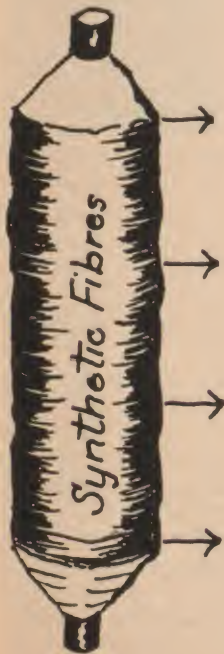
The Wave

Coil with
a torque

A coil with
a torque

Crimped, or
marcelle type

A curl with
no torque



THE ROMANTIC . . .

(Continued from page 14)

There are 5 locks between Greeces Point and Grenville and the upper locks were somewhat narrower than the 2 lower locks at Carillon which were not built until after 1828. The project was completed in 1834 when the first boat sailed through the canal system. The locks bear an inscribed stone on the side with the number of the lock in Roman numerals followed by "Royal Staffs Corps" and the date of construction.

The extent of the Government land expropriated for the canal system is marked by a number of boundary stones. These take the form of large rectangular stones, the lower part firmly embedded in the ground exposing the top two feet on which is engraved, with the Government broad arrow, the letters WR with an O below, then a second broad arrow below which is the identification number of the stone in Roman numerals.

In 1870 further improvements were made to the canal system by enlarging the locks and at No. 5 lock near Greeces Point the old and new locks still exist side by side.

This section of the river Ottawa

is also historical for the famous stand that Dollard des Ormeaux made in the defence of Montreal in 1660 when he engaged 700 Iroquois Indians in the Battle of the Long Sault. Dollard and his men fought behind a wooden palisade but the exact location of this fort is still in doubt. Abbé Arthur Guindon, priest at St. Sulpice, located the position at Carillon and has a cross erected to mark the spot.

There is local tradition however that the fight occurred on the south bank of the Ottawa on land a third of a mile below the position where the little Rideau River enters the Ottawa about 5 miles from Hawkesbury. This site commands a good view of the Ottawa and the portage trail and is adjacent to a good water supply. In an attempt to settle the issue, T. E. Lee carried out excavations of this site in 1951 and his findings are given in the Annual Report of the National Museum of Canada for 1953.

The results of the excavations were confused by the fact that this site had been occupied on at least three occasions, and someone, possibly an early trapper, had constructed a small dugout for himself in the early 1800's. Further

excavations however revealed the line of a palisade large enough to shelter Dollard's party. No weapons were found on the site but the top of a keg was unearthed and it is known that during the fight Dollard unsuccessfully tried to hurl a keg of powder over the palisade.

Victor Morin in 1953 wrote a pamphlet in which he brings additional evidence that Carillon and not the south side of the River was the true Dollard site. He quotes from the diary of Chevalier de Troyes who described an expedition up the Ottawa to Hudson Bay in 1686 where he considers there is proof that the site of the battle was on the north side of the River. The diary states that a party saw at the end of the Long Sault traces of the 17 Frenchmen who sustained the continued efforts of 700 Iroquois. Morin also considers that the fight must have taken place on the North side of the River as the south side was too steep and rocky and the Chute à Blondeau rapids too strong to allow the Indians to have navigated the south side. It is a frustrating thought that neither site may be the correct one and that all evidence of the true site may shortly be forever lost under the waters of the new dam.



At right, the old narrow canal (1825-30) has been preserved as a separate entity. At left, the No. five lock (1870).



The canal at Stonefield near the Dewar Hill, looking towards Grenville.

THE WOODLOT . . .

(Continued from page 12)

ceipts have come from maple sugar products. Hence the sugar bush has received considerable attention. In 1950 it was fenced to keep out the live stock. The iron-wood trees which had been very numerous were removed. Defective trees and competing trees were cut and marketed for fuel and for mill logs. Then two years ago the fully matured sugar maple were cut and sold to permit the expansion of the more rapidly growing younger trees. Selective thinning has been carried out in the young

growth.

Mill logs represent twenty-four per cent of the receipts and have included white ash and elm for hockey stick stock; Yellow Birch for veneer; Maple for bowling pin stock; second grade logs for railway ties; spruce and fir for construction lumber.

The sale of Christmas trees represents eight per cent of the receipts; two per cent were cedar blocks for lath stock, and the remaining one per cent represents the pulpwood.

In one part of the lightly wooded land, a ten acre piece has been

developed into a recreational area, with three ponds, two cottages and a large camping ground. Needless to say this area is enjoyed by many neighbours and visitors as well as the farm family.

Hence we can say that the farm woodlot has been a source of considerable revenue. It has maintained and strengthened the value of the farm, and today, when it is becoming the major branch of our farm operations, we have found that it has played a large part in making the farm occupation a very happy and satisfying way of life.

The Better Impulse

NEWS AND VIEWS OF THE
WOMEN'S INSTITUTES OF QUEBEC

FROM THE OFFICE

PROGRAMS — Please include May at least in next year's program.

Citizenship Booklet "Citizenship Projects," is available from Citizenship Branch, Dept. of Citizenship & Immigration, Ottawa.

QWI Convenors — Articles for Journal should be under 1000 words if possible, preferably 750. March — Publicity, April — Citizenship, May — Agriculture, June — Home Economics, July — Publicity, August — Welfare & Health, September — Education, October — Citizenship, November — Agriculture, December — Home Economics, January — Welfare & Health, February — Education.

Competitions — Provincial closing dates: Chair Seats-Feb. 1, 1961.

Play-Feb. 1, 1961.

Histories — Feb. 1, 1961.

National closing date for all — April 1, 1961.

Citizenship Project — Provincial — March 31, National April 30.

All members: Because of letters received, a note of clarification. When the Journal office reorganized their mailing lists, all names were taken out of the files and only those put back whose names came in on the membership lists as paid up members on their branches. This naturally included those with Life Memberships, unless they had paid their usual annual dues.

THE Jubilee Broadcasts will be heard over CJAD at 11.20 a.m. the last Wednesday of every month through June.

A lady in Ontario having collected information on the early days in that province, would like to do the same with Quebec. She would like stories of the early days and recipes, etc. Address— Mrs. Wm. Drevniok, Gilmory Farm, R.2, Combermere, Ont.

LADIES WANTED, make up to \$26.00 a week doing simple home sewing in your spare time. Write Box 491, Adelaide Post Office, Toronto, Ont.

JOINS WI STAFF



MRS. Alberta Wells, a new acquisition to the QWI staff, comes to us from Noranda, Que. Mrs. Wells is a widow with five children, ages 15 to 23, and has had professional experience in sewing, tailoring and cooking. She is also perfectly bilingual.

After two weeks' experience with the Extension Staff of the Department of Agriculture at Quebec in February, we expect she will be available for courses in sewing and tailoring with the QWI the latter part of the month.

We are sure Mrs. Wells is going to be very popular with the members.

OUTLINE: WELFARE AND HEALTH

by Gladys H. HOLMES

The reports received for summary for the June Convention did not indicate that too great an interest had been taken in what I considered to be a really vital part of the work suggested; namely action re the vaccination of adults for Polio. In June, we were reminded that the Polio level was far already ahead of the 1959 date. This is an area of work where a little timely publicity effort can give big rewards. Remember that Polio is no respecter of age, recovery cannot be guaranteed and vaccination is free at your local Health Unit. The charge from a private doctor is no more than an average office call. The vaccine is free. You pay the doctor for his services.

Referring to another item from last year's outline, "Eye Banks", I would advise you that representatives from the Canadian National Institute for the Blind are most co-operative in providing information and speakers on this topic.

The Quebec Association for Retarded Children advise, that "Retarded Children can be helped — can show striking improvement in mental ability, emotional stability, and even physical appearance." The study of retarded children is one of our continuing projects and it is worthy of your attention. Do make a study of it, do all that you can to further any work undertaken to better their condition, and keep yourselves informed of any new developments.

There is now a treatment available for Leukemia, at the Hematology Department of the Royal Victoria Hospital, Montreal. This is very successful in children suffering from the disease, less so in adults. There are no claims made for a positive cure, but it can and does arrest the disease, allowing the patient to enjoy a fairly normal life, so long as he continues the treatment. I suggest that you could obtain further information on this important development.

Another topic which is frequently referred to in the Press, is "Infant Mortality." In spite of what seems to be good hospital care and continued study on the part of medical doctors to improve their obstetrical practices, the figures published on Infant Mortality still show that we are not making sufficient improvement here in Quebec Province. A study of your local situation compared with statistics furnished by the Department of Health might reveal some interesting facts and point up some faults that could be corrected.

There is no lack of interesting information published in every conceivable phase of medicine, but please do remember to go to an authentic source for your material. Your Federal or Provincial Department of Health has pamphlets on any subject you might care to study, and the information found there is much more reliable than what we read in the various maga-

(Continued on page 21)

PROFILE



**Mrs. V. R. Beattie, Provincial
Treasurer**

Mrs. V. R. Beattie our Provincial Treasurer was born in Compton County, and has spent most of her

life in the Eastern Townships. After finishing High School, she took a business course in Sherbrooke and after working for a year, went to Massachusetts for three years during World War 1. She returned to Canada in 1918, and worked in Sherbrooke until her marriage to Raymond Beattie in 1923. They lived on a farm in Lennoxville, where Mrs. Beattie soon joined the Ascot W. I., becoming Home Economics convener and later Treasurer of that branch.

In 1940, the Beatties moved to Richmond in connection with the Wales Home Farm, and Mr. Beattie still holds the position of manager there. The president and vice president of the local W.I. soon called on Mrs. Beattie, and invited her to their meeting. It was an evening meeting, so accompanied by Mr. Beattie she started off. Unfortunately they got slightly mixed up with their directions, landed in a

pasture, and never did get to that particular meeting! However, she was ready for the next meeting, joined, and has been a faithful member ever since.

In 1941, Mrs. Beattie was elected Treasurer of Richmond County, in 1943 was 2nd vice president, going on to President in 1947. In her term as president, Richmond County celebrated their 25th Anniversary, and formed two junior W.I.'s. One has developed into an active branch of young married women, and the other was disbanded for lack of junior members.

In 1957, Mrs. Beattie was a visiting delegate to the A.C.W.W. Conference in Toronto. In 1960 she was elected president of Richmond County for the second time, and she has been convener of Citizenship in County and Branch, as well as President and Treasurer of her own branch, Spooner Pond. Mrs.

(Continued on page 21)

WEAVERS! Here are instructions for weaving seen at right.

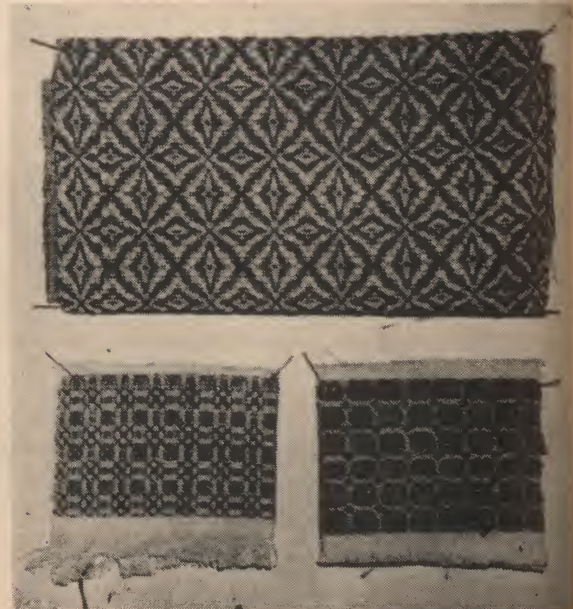
(This was taught to Juniors at Marcil, P.Q.)

1. Instructions for material at top.
2. Instructions for material lower left.
3. Instructions for material lower right.

L Modified Hop Vire THREADING

	4	4			4			4	4	4			4	4	4			4	4	4
3				3	3			3	3	3			3	3			3	3	3	3
	2		2				2	2		2	2	2		2	2		2	2	2	2
1		1	1				1	1	1	1			1	1	1		1	1	1	1
				3																
		2																		
			1																	
				1																
		2																		
			2																	
				3																
				3																

DETAILS
REED - 15 dent per inch
 2 ends per dent
MATERIAL - 12" wide for handbags
WARP - $\frac{3}{8}$ " white cotton-360 threads
WEFT - tabby-same as warp.
OVERSHOT-double on bobbin- $\frac{3}{8}$ " green cotton
USE TABBY $\frac{2}{8}$ " blue rayon.



2. Maybeth

	4	4		4			4		4		4		4		4
3				3	3		3	3		3	3				3
	2		2	2			2	2	2		2		2	2	2
1		1	1				1	1		1	1	1	1	1	1
			1												
			3												
			1												
				1											
					1										
			3												
				1											
					1										
						1									
							1								
								1							

DETAILS

REED - MATERIAL - WARP
SAME AS ABOVE.
weft - double on
bobbin $\frac{2}{8}$ blue
rayon.

REPEAT TABBY- same as
USE TABBY warp.

3. Rose Valley

4	4		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
3			3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
2		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
1	1	1			1	1													1

2
 1
 2
 1
 1
 1

DETAILS
 REED - MATERIAL - WARP
 SAME AS ABOVE
 WEFT - double on bobbin
 REPEAT $2/3$ green cotton
 TABBY - same
 USE TABBY as above.

Beattie stresses that she owes much to the co-operation of County and Branch members.

Mrs. Beattie is also active in I.O.D.E., having been Regent and Treasurer; in fact she is very interested in any Community work.

WELFARE (Continued from page 19) zine articles, which are apt to reflect one person's opinion, rather than present facts.

This will be my last work outline. I hope it may prove to be of some value to you, and I look for reports from every county at the end of

what I hope will be an interesting year's work in your group.

Topics in this department:

1. Health of the Family and Community.
2. Welfare.
3. World Health Organization (WHO).

The Month With the W.I.

CHRISTMAS activities were reported in every instance this month, and it just is not possible to tabulate the tremendous amount of Christmas Cheer dispensed by the Q.W.I. We would need a Journal to ourselves! Brookbury W.I. have produced a Cook-Book, it sells for \$1.00 and copies may be obtained from the Publicity convenor, Mrs. O. B. Downes, Bishopton, Que.

BONAVENTURE:

BLACK CAPE presented five Life Membership certificates, four to Charter Members: Mrs. Edith Irvine, Mrs. Mamie Campbell, Mrs. Frances Willett and Mrs. June McColm. The fifth went to Mrs. Ida Henderson. Cod Liver Oil capsules are being distributed to school children. **MARCIL** had a Whist Party, and are supporting the Hot Lunch project at the local school. **PORT DANIEL** discussed next year's School Fair and report a busy time with Christmas Cheer projects. **RESTIGOUCHE** came to the aid of Santa Claus with 71 bags of candy for local children, as well as gifts for the aged and shut-ins.

BROME:

ABERCORN sent boxes to needy families, and **AUSTIN** report bursaries won by Judy Hopps and Linda Cochrane. Pillow cases and bath towels were purchased for the Cecil Memorial Home. **KNOWLTON'S LANDING** members and their families enjoyed an oyster and ham supper. **SUTTON** held a glove-making course and sent socks and a quilt to the Red Cross.

CHATEAUGUAY-HUNTINGDON:

AUBREY-RIVERFIELD had an exhibit of handwork done by members during 1960, and a paper on "What every woman should know about Banking" read by Mrs. Gordon Easton. **DEWITTVILLE** had a sewing demonstration by Mrs. Keith Greig, Home Economist, and a cookie contest was judged by their guest. **DUNDEE** heard about "Short Cuts in Housekeeping" from Miss McQuat, and **FRANKLIN** report an enjoyable Christmas meeting. **HEMMINGFORD** paid tribute to the memory of the late Mrs. Reeves. An interesting talk on Africa was given by Mrs. J. Robertson, and a large coffee-urn donated to **HEMMINGFORD** High School. **HOWICK** had a demonstration by Mrs. Huntley Greig on home-made gifts. **HUNTINGDON** heard a humorous talk on the training of a nurse, given by Nurse Garrett of Huntingdon Hospital, and a paper on life in rural Northern Ireland, read by Mrs. Wood. **ORMSTOWN** held a card party to raise funds, and **RIVERFIELD** made three quilts at a quilting party and donated them to the Welcome Hall Mission. A Life Membership was presented to Mrs. W. G. Allen.

COMPTON:

BROOKBURY held A Turkey Supper and a New Year's Eve Dance, and distributed three cases of can-

ned meat to needy families. **BURY** discussed safe drinking water and the pollution of our streams, and **CANTERBURY** sent a donation to the C.N.I.B. **COOKSHIRE** enjoyed a talk by Miss Wendy Fuller on the work accomplished by the Junior Red Cross in Cookshire High School. Mrs. Heatherington, Chronicler of the Compton County Museum, gave a talk on the work accomplished during the past year. Orders were taken for "Milko" shakers, to augment funds. **EAST ANGUS** had a quiz on Nutrition, with Mrs. V. Bernard the winner, and Mrs. Labonte, Publicity convenor, read a paper entitled "Suggestions for Rollcalls from our Ontario neighbours." A paper Drive was successful, and this W.I. is paying for cocoa to be made at the local school. **EAST CLIFTON** read or recited a short piece, humorous or otherwise, with Mrs. V. Bell emerging the winner. Mrs. Irwin McBurney, County Convenor of Welfare and Health, spoke on "Fear Anaesthesia? — Not if you know your facts." **SAWYERVILLE** had a demonstration on making Cancer dressings and have now taken up this worthwhile project. **SCOTSTOWN** sent gifts to the Wales Home.

GATINEAU:

EARDLEY had a demonstration on Leather Work given by Miss Therese Robinson, and **KAZABAZUA** report an enjoyable Christmas meeting. **RUPERT** sent boxes of prunes to the Brookdale Home and the Gatineau Hospital, and **WAKEFIELD** had a gift-wrapping demonstration given by Miss Lise Leduc. **WRIGHT** sent a card of congratulations to Miss Charlotte Whitton, Mayor of Ottawa. Mrs. Fred Thayer, Mrs. Edwin Molyneaux and Mrs. Snowden Ogilvie presented a skit entitled: "The Christmas Box Mystery." A Community Carol Sing-Song was sponsored by this Branch.

JACQUES CARTIER:

STE. ANNE DE BELLEVUE enjoyed a talk by Miss Holmes on her trip to Northern Quebec. Members are meeting each week to make hooked chair seats for the Tweedsmuir Competition and hope to continue these meetings with other projects.

MEGANTIC:

KINNEAR'S MILLS had a successful card party and a party for pre-school children. **INVERNESS** have completed a quilt and sent cotton to the Cancer Society.

MISSISQUOI:

COWANSVILLE had Rev. John Peacock as guest speaker, his subject being "Farmborough" in the Noranda — Rouyn district and stressing the need for help there. **DUNHAM** had as roll-call "Tell Something you like about another W.I. branch." Mrs. J. V. Ellis spoke on the history of Dunham and a paper on water pollution was read. **FORDYCE** report that they sing the Hymn of all Nations at every meet-

ing. Reports were as follows: Water Pollution; Let's Trade Teen-Agers; Handy Hints; Famous Nursery; Protect against Fire, and extracts from the Federated News. STANBRIDGE EAST held a sing-song and a card party.

PAPINEAU:

LOCHABER have written to Premier Lesage and others, protesting the proposed highway through the Arboretum and replies have been received stating that the matter would receive full attention. Christmas parcels were delivered to St. Michels Hospital in Buckingham.

QUEBEC:

VALCARTIER enjoyed a talk by Miss McQuat on "Cutting Corners in Housework" and a demonstration on preparing a quick meal. Mrs. McCartney and her little helpers demonstrated First Aid and Bandaging.

RICHMOND:

CLEVELAND told of a local event during the past year for roll call and held a contest on squares, with Mrs. Royce Taylor the winner. DENISON MILLS report an ambitious program of Christmas Cheer and a discussion on Richmond Fair prizes. GORE have given magazine subscriptions to St. Francis High School and a donation to the Hot Lunch Fund for Needy Children at that school. A gift was presented to Mrs. Vogelsanger, who is returning to Switzerland for a holiday. MELBOURNE RIDGE heard their Welfare and Health convenor, Mrs. Albert Smith, speak on the needs of the Cancer Society. A representative of this society will attend their next meeting to give further details. RICHMOND YOUNG WOMEN held a discussion on the P.T.A. and sent a donation to the Cecil Memorial Home. Bingo was the evening's entertainment, with Mrs. C. Grainger the lucky winner of a linen tablecloth. RICHMOND HILL — "Name your favourite magazine and Why" and "Recite a scripture verse containing the word "Peace" were roll calls here. A contest on "What we know about Canada" was won by Mrs. V. Farant, and Mrs. L. Healy made the best article from a yard of cloth. A donation was given for milk for a needy family. SPOONER POND

have formed three groups to meet once a month to work on Cancer dressings. Bed-jackets have been made from old shirts. A jar of jam or jelly (to be used in Christmas parcels) was the roll-call. SHIPTON enjoyed a chicken pie supper with their families. Mrs. Vermeeren read a paper on water pollution, stressing the study of conditions in your own area.

ROUVILLE:

ABBOTSFORD had Mr. Roht of Macdonald College as guest speaker and greatly enjoyed his informative talk on Landscaping and Horticulture. 40 jars of jams and jellies were sent to the Diet Dispensary in Montreal and gifts to retarded children in a near-by home.

STANSTEAD:

BEEBE sent 18 boxes of Christmas Cheer, and HATLEY held a successful card party. Newcomers were welcomed at their meeting. MINTON sent a donation to the Dixville Home. STANSTEAD NORTH entertained the County president at their Christmas dinner meeting, and WAYS MILLS had a demonstration on making decorations. Gifts were sent to the Grenfell Mission. TOMOFobia held a public dinner and a Christmas dinner meeting. All branches in this County sent Christmas Cheer to the Dixville Home.

SHERBROOKE:

ASCOT were introduced to the new superintendent of the Lennoxville Experimental Farm, Mr. Brisson. Mr. B. Holtham Q.C. gave an address on "The History of the Eastern Townships." BELVIDERE renewed their C.A.C. subscription and held a candy and bake sale. BROMPTON ROAD worked 12 hours at the Cancer Dressing Station and sent gifts to Immigrants. A paper was read on Water Pollution and a member, Mrs. Hatch attended the prize-giving at Mitchell School in Sherbrooke. LENNOXVILLE had a quiz on water pollution and a paper on the necessity of joining the Home and School Association. 14 ladies made 26 new hats and remodelled 6, under the supervision of Miss McQuat. MILBY purchased a new stove for their club-room and are working on their Tweedsmuir project. A member attended the organization meeting of the Lennoxville Cancer Dressing Station.



Brome County W.I. Semi-Annual Convention held at Knowlton's Landing on their 40th Anniversary. Seated, left to right: Mds. Francis Scrutten, 1st Vice-President; Mrs. D. Lee, Secretary; Mrs. Bernice Russell, County President; Mrs. H. Garland, Treasurer. Standing: Mrs. E. Sherrer and Mrs. H. Page, Abercorn W.I.



Visitors' Night, held at home of Mrs. Myrtle Vincent. Standing are the Cohostesses, Mrs. Bernice Russell and Mrs. Vincent. Seated is Mrs. Reid Sutton, W.I. Branch President.

The College Page

MACDONALD COLLEGE ROYAL

February 24, Friday at Macdonald College

EVERYBODY WELCOME

Your Future — Our Purpose

PROGRAMME

9:00 a.m.	Opening of Livestock Show
10:00 a.m.	Official Opening, CROWNING OF QUEEN, and announcement of Winning Booth.
10:45 a.m.	Welcome of High School Students
11:15 a.m.	Cooking With Chocolate
11:15 a.m.	Propagation of House Plants
11:30 a.m.	Physical Education Displays

MEALS

1:00 p.m.	Livestock Show
1:30 p.m.	Tractor Rodeo
1:30 p.m.	Square Dance Display
2:00 p.m.	Cooking With Chocolate
2:00 p.m.	Physical Education Display
2:00 p.m.	Handicraft Display
3:00 p.m.	Puppet Show
3:00 p.m.	Fashion Show
3:00 p.m.	Royal Tea
3:30 p.m.	Champion Livestock Showman Competition
3:30 p.m.	Foreign Desserts
3:30 p.m.	Puppet Show
4:30 p.m.	Sale of Home Economics Products

MEALS

7:15 p.m.	Presentation of Awards
-----------	------------------------

RECESS

8:30 p.m.	Green & Gold Revue: "Los Politicos"
-----------	-------------------------------------

SWINE RESEARCH UNIT OPENED



Vice-Principal Thomson cutting the ribbon of the new Research Unit.

A ceremony on the afternoon of January 23rd marked the official opening of a new piggery at Macdonald College which will be used for swine research. The unit which was opened by Vice-Principal Thomson of McGill University, cost \$50,000. Sixty-three industrial firms contributed toward the cost of the building.

The building is the most up-to-date of its kind in Canada. It is 144 feet by 32 feet. It has a 12-Ton capacity feed bin which can be filled from bulk feed trucks; a special draught reducing ventilation system; strip lighting; an automatic gutter type dung remover and a wall insulation system which removes the need for a conventional heating system. There are facilities for individual feeding of swine and a slaughter room in which hog carcass quality can be determined.

The experimental programme will cover a wide range. Nutritional tests, feed efficiency and carcass quality and gain experiments are scheduled. Cross-breeding programmes are also planned as are comparisons between crosses and leading purebred breeds.

Left: winning booth at the Macdonald College Royal 1960. Shown are Kent Hodgson, left, (now farming at home) and Chuck Dumbrell, now with the Farm Department, C.B.C., Toronto. Both Kent and Chuck graduated last year.

Figure 2 — Tap hole with spile and formaldehyde pellet.





THE MACDONALD LASSIE